

*Stated Meeting, April 16, 1875.*

Present 16 members.

DR. CARSON in the chair.

Letters of acknowledgment were received from the Natural History Society at Wiesbaden, the British Association, and the American Ethnological Society in New York.

A letter of envoy was received from the Central Physical Observatory at St. Petersburg.

A letter was received from the Academy of Sciences of Chicago requesting the replacement of Proceedings of the American Philosophical Society lost by the fire. On motion, the request was granted.

A letter was received from the Department of the Interior, U. S. Bureau of Education, dated March 31, calling for information respecting the Library. On motion, referred to the Librarian.

Donations for the Library were announced from the Academies at Berlin and Bruxelles; the Societies at Görlitz, Wiesbaden, and Bonn; the Editors of the *Annales des Mines*, *Révue Politique*, and *Nouvelles Meteorologiques*; the Royal Institution; Editors of *Nature*; and Mr. Robert Twining; the *Société Littéraire et Philosophique*, Quebec; the Massachusetts State Board of Health; *Silliman's Journal*; State Geologist of New Jersey; *American Journal of the Medical Sciences*; Department of the Interior, U. S.; and editors of the *Western*.

The death of Dr. Andrew A. Henderson, at the U. S. Naval Laboratory, Brooklyn, N. Y., on the 5th inst, aged 59, was announced by Mr. Lesley. On motion, Mr. Lesley was requested to prepare an obituary notice of the deceased.

The death of Mr. John Henry Towne, of Philadelphia, at Paris on the 6th inst., was announced by Mr. Lesley. On motion Mr. Sol. W. Roberts was requested to prepare an obituary notice of the deceased.

Dr. LeConte read another communication from Dr. W.

J. Hoffman, dated Reading, April 5, 1875, respecting the Practice of Cremation among the Páh-Utes, or Digger Indians, of California. (See page 414.)

Prof. Frazer read a communication on the composition of trap rocks and gave illustrations on a screen, from slices, with a lime light, and various powers of lens. (See page 402 and plates 1, 2, 3, 4.)

Mr. Chase communicated a comparison between the lunar-monthly rain-fall in the United States as indicated by the morning weather-maps for three years, and the Pennsylvania Hospital observations for 43 years. (See page 416.)

Mr. Lesley said that the members present might be interested in the fact that he had succeeded in obtaining a cross-section projection of the two azoic mountain ranges which once occupied Southeastern Pennsylvania, giving for the first time a correct explanation of the structural geology of the gneiss and mica-slate belt commencing at Easton, on the Delaware River, and passing through Philadelphia, Delaware, Chester, and Lancaster Counties toward Baltimore. The sharp synclinal at the soapstone quarries separates an anticlinal mass to the north from a broader anticlinal mass to the south. The axis of the latter passes through the Fairmount reservoir, in Philadelphia; and a careful collation and projection of the dips observed, (by Messrs. Young and Fagen, aids on the survey,) along the Reading Railroad track, up the west bank of the Schuylkill, upon a base line of vertical section transverse to the general strike, namely, N. 5° E,—S. 5° W. shows that the highest rock now seen in that synclinal originally rode over Fairmount at an altitude of about 15,000 feet; and over the northern anticlinal at an altitude of 10,000 feet. The dips of the northern anticlinal swing round from south by east to north in a regular curve, showing that the northern mountain mass declined rapidly eastward, that is towards Easton, where the whole of the azoic sinks beneath the New Red, of New Jersey. This mountain, dying down eastward, stopped the normal course of the Schuylkill from Reading to Chester; and the present

notable zigzag of the river towards the Northeast and then towards the Southeast is thus explained. The ancient drainage passed around the eroded east end of the mountain. For a good many years he had maintained the existence of these ancient Alpine ranges in early times, but without until now deducing the opinion from regularly compiled structural elements of observation.

Pending nominations Nos. 766 to 780 were read, and Nos. 766 to 779 balloted for, and the following persons declared duly elected members of the Society:

Mr. Wm. A. Ingham, of Philadelphia.

M. Viollet le Duc, of France.

Mr. John McArthur, Jr., of Philadelphia.

Judge Joseph Allison, of Philadelphia.

Mr. Edward Penington, of Philadelphia.

Dr. Henry Chapman, of Philadelphia.

Mr. Alexander Agassiz, of Cambridge, Mass.

Prof. Frederick Prime, Jr., of Easton, Pa.

Prof. S. P. Langley, of Allegheny City, Pa.

Mr. H. S. Hagert, of Philadelphia.

Prof. C. F. Chandler, of New York.

Mr. Rossiter W. Raymond, of New York.

Prof. Leonard G. Frank, of Philadelphia.

Mr. Wm. P. Tatham, of Philadelphia.

And the meeting was adjourned.

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*Stated Meeting, May 7, 1875.*

Present, 20 members.

Vice-President, MR. FRALEY, in the Chair.

Letters accepting membership were received from Mr. Alex. Agassiz, dated Cambridge, Mass., April 20; Judge Joseph Allison, dated Philadelphia, April 21; Mr. John McArthur, Jr., dated Philadelphia, April 20; Prof. Leo. Geo. Frank, dated Philadelphia, April 19; Mr. H. S. Hagert,